



# Bharat Heavy Electricals Limited

(A Govt. of India Undertaking)

Transmission Business Group

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## **CORRIGENDUM - 08 TO NIT NO-87018**

**Dated 27-12-2024**

**Subject: Corrigendum-08 to Tender enquiry for Pre-Bid Tie up with the GIS OEM for Supply & Services of 400kV GIS Package (Package-II) at KPS 3 Tender / Project.**

Project : POWERGRID's 400kV GIS Package (Package-II) at KPS 3  
Equipment / Item : Supply & Services of 400kV GIS  
Enquiry No/Date : 61Q2500406 Dated 29-11-2024  
BHEL NIT NO : 87018  
**Original Tender due date : 11-12-2024**

This Corrigendum is issued by BHEL TBG against above mentioned NIT/ enquiry for issuance of Technical Corrigendum Rev-02 along with Technical clarifications (enclosed). Tender due date shall remain same i.e.30-12-2024.

All other terms and conditions for this tender enquiry shall remain unchanged.

Bidder to ensure submission of offer on or before due date.

Note: Tender ID on CPP Portal is **2024\_BHEL\_42419\_1**.

Thanking you

-----Sd/-----

Gaurav Agarwal  
BHEL TBG, NOIDA

**Ref. No.**      **Technical Corrigendum-02**

**Project:**      **Pre-Bid Tie up for,  
400kV GIS Package (Package-II) at KPS 3 (HVDC), South Olpad (HVDC) and Extn. of existing KPS3 (GIS) station including civil works associated with  $\pm 500$ kV, 2500 MW KPS-3 (HVDC) and South Olpad (HVDC) Scheme associated with Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8GW): Part C through Tariff based Competitive (TBCB) route; Spec No: CC/T/W-GIS/DOM/A06/24/14461.**

**Date:**      **27.12.2024**

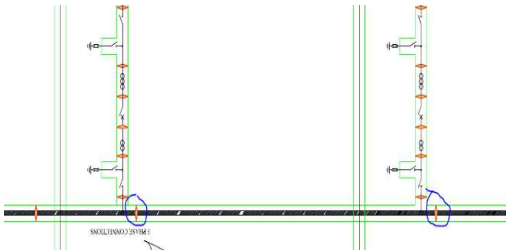
Sl. No.	Volume/ Section/ Clause	Volume/ Section/ Clause as Existing	Volume/ Section/ Clause as Amended/ Added in Technical Corrigendum-01
1	Technical Specification/ Section-1	Section-1	Please refer Clarification No.VI (Technical) dated: Clarification No. VI dated 27.12.2024 (Copy attached).

**Note:**      1. The changes/ revision are marked/ highlighted in yellow.  
2. Amendment/ addendum/ clarification/ corrigendum issued herein shall form part of Technical Specification.  
Bidders to please note that amendment/addendum/ clarification/ corrigendum issued shall supersede the respective Volume/ Section/ Clause of Technical Specification Document to the extent for the Volume/ Section/ Clause or part thereof the amendment is issued.

**Clarification No. VI dated 27.12.2024 for the Bidding Document for 400kV GIS Package (Package-II) at KPS 3 (HVDC), South Olpad (HVDC) and Extn. of existing KPS3 (GIS) station including civil works associated with ±500kV, 2500 MW KPS-3 (HVDC) and South Olpad (HVDC) Scheme associated with Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8GW): Part C through Tariff based Competitive (TBCB) route prior to RfP bid submission by POWERGRID to BPC. Specification No: CC/T/W-GIS/DOM/A06/24/14461**

S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
<b>TECHNICAL QUERIES</b>				
1	BPS Supply Item Sr. no. 30	400/33kV, 50MVA, 3 ph Power transformer Dynamic Short Circuit Test requirement Clause no. 3.1.4.1 Technical Specification 400kV Transformer specification_Rev 13	We understand that as per clause no. 3.1.4.1 Technical Specification 400kV Transformer specification_Rev 13 "A manufacturer who has successfully conducted a Dynamic Short Circuit Test on a 315 MVA or higher-rated 400/220/33 kV or 400/230/33 kV, 3-phase Auto-Transformer by the originally scheduled date of bid opening" is eligible to supply the 400/33 kV, 50 MVA, 3-phase power transformer without the need to perform a short circuit test on the offered transformer.  Kindly confirm if our understanding is correct.	The applicability of 400/33kV Transformer shall be in line with Technical Specification, Section-RFP of bidding document and CEA Transformer manual "Standard Specifications and Technical Parameters for Transformers and Reactors (66kV and above)"
2	Section -Transformer (Upto 400kV Class)  Clause no 3.14 Page-7 of 109	Dynamic Short Circuit Test requirement and Design Review of 50 MVA 400/33 KV Power Transformer	Dynamic Short Circuit Test requirement of 400/33 KV transformer is not mentioned in applicable clause. Kindly confirm the dynamic short circuit requirement of 400/33 KV class transformer if any.  Please also confirm the requirement of Design-Review. If required, please also confirm that design review ((incl. short circuit test) of subject transformer based on the similar transformer supplied by differnet factory of the Bidder is acceptable. Please also note that both Units/Factories have similar design and manufacturing practice.	For Short Circuit test requirement- The applicability of 400/33kV Transformer shall be in line with Technical Specification, Section-RFP of bidding document and CEA Transformer manual "Standard Specifications and Technical Parameters for Transformers and Reactors (66kV and above)"  The equipment shall be supplied from same manufacturing works where previous equipment of same design manufactured and type tested.
3	Bid Price Schedule (Sch-1 & Sch-2)  Sl. No. 96 & 128	GIS Portion-Mandatory Spares-400kV GIS  UHF PD SENSORS OF EACH TYPE ALONG WITH BNC CONNECTOR FOR 420KV GIS	As per the BPS, the spares related to PD monitoring are being listed in line item. However there is no Online PD monitoring item in Main supply & testing equipments. Kindly clarify whether PD Monitoring system is in scope of bidder or not.	On line PD monitoring system is not envisaged under the present scope. UHF PD sensors (main & spare) are to be supplied in line with BPS & Annexure-IV of 420kV GIS description for 420kV GIS modules.

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
4	Technical Requirement of Sub-contractors GTR Rev. 15	<p>"The sub-contractor must have either of the following experience of having successfully completed similar works during last 7 years as on the last day of month previous to the one in which the sub-contractor is proposed to be engaged:</p> <p>a) Three similar works costing not less than the amount equal to 40% of the cost of the work to be sub-contracted.</p> <p>OR</p> <p>b) Two similar works costing not less than the amount equal to 50% of the cost of the work to be sub-contracted.</p> <p>OR</p> <p>c) One similar work costing not less than the amount equal to 80% of the cost of the work to be sub-contracted.</p> <p>1. Minimum Average Annual Turnover <b>**</b>(MAAT) for best three years i.e. 36 months out of last five financial years of the sub-contractor should be.....:</p> <p><b>**</b>Annual Gross Revenue from operations/ Gross operating income as incorporated in the profit &amp; loss account excluding Other Income.</p> <p>a) Similar work shall mean the work which are of similar in nature to the work to be sub-contracted e.g. for the scope of civil work to be sub-contracted, the experience should be of civil work.</p> <p>b) The aforesaid qualifying requirement shall however, not be applicable for engaging labour as per extant policy.</p> <p>c) The cost of the work to be sub-contracted shall be considered as available in the Contract Agreement. However, if the value is not available in the Contract Agreement, the same shall be the estimated value for such work.</p> <p>d) The above criteria is in addition to extant policy on selection of sub-contractor as per WPPP, Vol-II.</p> <p><b>e) The MAAT requirement shall be worked out basis the following formula:</b>  <b>Minimum Average Annual Turnover (MAAT) = Cost of the work to be sub-contracted x 1.5/Completion period in years**</b></p>	<p>This criteria lays stringent condition for MAAT w.r.t. guidelines prescribed by CVC due to which getting healthy competition and bidding is tough at our end.</p> <p>We request POWERGRID to relax MAAT requirement for meeting Technical Requirement of Sub-contractors.</p>	Bidder to quote as per provision of bidding documents.
5	Typ SLD		<p>Our type tested 400KV GIS has passive non segregated busbar design. We meet the requirement of service continuity, maintenance &amp; repair without provision of any barrier in busbar. All the requirement of repair &amp; maintenance as per specifications are met with passive non-segregated busbar design. This design is accepted by various utilities in India and Abroad and also in ongoing projects of PGCIL. This type of passive non-segregated busbar design is working satisfactorily at site without any issues hence we request an acceptance of this design.</p>	Acceptable in case the other requirements of technical Specification are fulfilled for offered design of GIS
6	BOQ	Bay for Dia completion for KPS 3 HVDC, KPS 3, and South Olpad extension.	<p>As per BOQ for some of the dia we have 02 bays in one dia. Please confirm if we have to quote CB bay for dia completion. If yes, please ammend the BOQ.</p>	Bidder to quote as per BPS
7	BOQ	420kV GIS Interface Module for Future Extension of Bus Bar As per TS	<p>We understand that future extension modules facilitating future extension of present scope GIS is to be quoted under this line item. Please confirm</p>	Bidder's understanding is as per the provision of contract document.

**Clarification No. VI dated 27.12.2024 for the Bidding Document for 400kV GIS Package (Package-II) at KPS 3 (HVDC), South Olpad (HVDC) and Extn. of existing KPS3 (GIS) station including civil works associated with ±500kV, 2500 MW KPS-3 (HVDC) and South Olpad (HVDC) Scheme associated with Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8GW): Part C through Tariff based Competitive (TBCB) route prior to RfP bid submission by POWERGRID to BPC. Specification No: CC/T/W-GIS/DOM/A06/24/14461**

S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
8	BOQ	420kV GIS Interface Module for Future Extension of Bus Bar As per TS	We understand that adapter and busbar modules to connect existig GIS to present scope GIS is to be quoted under this line item. Please confirm	Bidder's understanding is as per the provision of contract document.
9	Layout	Layout for KPS 3	Please support with complete layout of existig GIS at KPS 3 to understand the routing of 3000 mtrs BD.	Bidder to quote as per BPS. For KPS3 HVDC (New), Outline plot drawing is already provided. GA & SLD to be developed by Bidder.
10	Layout	Layout for KPS 3 and South Olpad	Please support with layout of existig GIS at KPS 3 and South olpad to understand the hall dimensions	The requisite detail shall be provided during detailed engineering. Bidder to extend the GIS hall to accommodate the GIS equipment under present scope of work.
11	General	Busbar GIB	We have not considered any GIB to in main busbars to connect the present scope GIS to existing GIS.	Bidder to quote as per BPS
12	General	Make and model	Please support with make and model of Existing GIS at KPS 3 and South Olpad.	The requisite detail shall be provided during detailed engineering.
13	General	Connection to existing GIS	Please support with flange details (Interface details), rating plates, gas pressure details, section view of existing GIS.	The requisite detail shall be provided during detailed engineering.
14	General	Availability of existing GIS supervisor + Tools to operated existing GIS	We request customer to kindly make available existing GIS supervisor at site for entire duration of coupling of present GIS to existing GIS. Also the cables from existing LCC to present scope LCC, tools, consumables, required to open existing GIS shall be scope of customer/Existing GIS OEM. Any charges occuring on account of Existing GIS supervisor and tools shall be borne by purchaser. Request customer to kindly confirm the same.	The detailed drawing of existing GIS and future extension module shall be provided to the successful bidder. OEM support, if required, for extension of existing GIS shall be arranged by the bidder under its present scope.
15	BOQ	Bay for Dia completion for KPS 3 HVDC, KPS 3, and South Olpad extension.	We understand that as per BOQ for some of the dia there is 02 bays in one dia. Please confirm if we have to quote CB bay for dia completion. If yes, please ammend the BOQ.	Bidder to quote as per BPS
16	BOQ	420kV GIS Interface Module for Future Extension of Bus Bar As per TS	We understand that future extension modules facilitating future extension of present scope GIS is to be quoted under this line item. Please confirm our understanding.	Bidder's understanding is in line with the provision of contract.

Clarification No. VI dated 27.12.2024 for the Bidding Document for 400kV GIS Package (Package-II) at KPS 3 (HVDC), South Olpad (HVDC) and Extn. of existing KPS3 (GIS) station including civil works associated with  $\pm 500$ kV, 2500 MW KPS-3 (HVDC) and South Olpad (HVDC) Scheme associated with Transmission System for Evacuation of Power from potential renewable energy zone in Khavda area of Gujarat under Phase-V (8GW): Part C through Tariff based Competitive (TBCB) route prior to RfP bid submission by POWERGRID to BPC. Specification No: CC/T/W-GIS/DOM/A06/24/14461

S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
17	BOQ	420kV GIS Interface Module for Future Extension of Bus Bar As per TS	We understand that adapter and busbar modules to connect existing GIS to present scope GIS is to be quoted under this line item. Please confirm our understanding.	Bidder's understanding is in line with the provision of contract.
18	General	Busbar GIB	We have not considered any GIB to in main busbars to connect the present scope GIS to existing GIS. Kindly confirm.	Bidder to quote in per meter rate as per BPS.
19	General	Make and model	Please support with make and model of Existing GIS at KPS 3 and South Olpad.	The requisite detail shall be provided during detailed engineering
20	General	Connection to existing GIS	Please support with flange details (Interface details), rating plates, gas pressure details, section view of existing GIS.	The requisite detail shall be provided during detailed engineering
21	General	Availability of existing GIS supervisor + Tools to operated existing GIS	We request customer to kindly make available existing GIS supervisor at site for entire duration of coupling of present GIS to existing GIS. Also the cables from existing LCC to present scope LCC, tools, consumables, required to open existing GIS shall be scope of customer/Existing GIS OEM. Any charges occurring on account of Existing GIS supervisor and tools shall be borne by purchaser. Request customer to kindly confirm the same.	The detailed drawing of existing GIS and future extension module shall be provided to the successful bidder. Any OEM support, if required, for supervision or for extension of existing GIS shall be arranged by the bidder under present scope of work.
22	General	Shutdown	We request a shutdown plan of the existing substation is mandatory and is required for a maximum of 3 times. A detailed schedule can be furnished during the time of project execution.	The shutdown plan at the existing substation for extension of GIS shall be finalised during detailed engineering.
23	General	Activities	We request all activities like, opening and closing of busbar compartments, degassing activity, etc. shall be done by customer/Existing GIS engineer. OEM Engineer will only take the necessary dimensions. Kindly confirm.	Bidder to extend the GIS at existing substation and any OEM support, if required, for supervision or for extension of the existing GIS, same shall be arranged by the bidder under present scope of work.

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
24	General	GIS adapter design	<p>Siemens GIS offer is basis assumption that</p> <p>1. Gas pressure of existing GIS considered is 5.2 bar rated pressure. Any thing beyond that needs to be evaluated technically.</p> <p>2. Extension of GIS is possible if, Existing GIS termination has provision of bolted connection joints (bushing) for future extension.</p> <p>3. Customer shall provide the complete interface (extension) module drawing of existing GIS which is to be extended, strictly in accordance with IEEE C37.122.6</p> <p>Anything beyond this on extension part shall be mutually discussed and agreed upon for technical feasibility, price if any, timelines, etc. during execution</p>	<p>The existing GIS will be complying to the CEA construction standard/ relevant IEC standard in line with RFP documents.</p> <p>The detail of OEM, Gas pressure and interface (End piece) module drawing shall be provided during detailed engineering.</p> <p>All supply/ works/ interface required for extension of existing GIS is in present scope.</p> <p>The conceptual GIS interface module drawing is attached in Section GIS rev 5A Annexure-9 of technical specification.</p> <p>Bidder to provide the solution in line with technical specification without any additional time &amp; cost implication to POWERGRID.</p>
25	General	Busduct bend	<p>We understand that In absence of layout we are following BOQ qty for busduct calculations. We are considering one bend for each phase. No road crossing considered. No building expansion joint is considered. Offer shall be on this basis. Any change during detail engineering shall have price implications. Kindly confirm</p>	<p>Bidder to quote as per BPS.</p> <p>The GIS extension area is clearly marked in the Outline drawing of South Olpad (Existing) R01 &amp; KPS3 (Existing) R01.</p> <p>The GIS shall be terminated as marked in layout/ space available for line in the respective outline drawing. The final route of GIB duct outside GIS hall shall be finalised during detailed engineering.</p> <p>Price of bends, expansion joints required for road crossings, entry/ exit to GIS hall etc. are part of the GIB duct outside GIS hall as mentioned in the BPS. Bidder to consider the same in their bid without any time and cost implication to POWERGRID.</p>
26	Price_schedule-PKG-II-400KV-TBCB ' Sheet: Sch-1	<p>Configuration of converter bay with associated tie bay (KPS-3 HVDC &amp; Ext. South Olpad) For KPS-3 HVDC &amp; South Olpad extn.</p> <p>Converter bay - 2 set</p> <p>Tie bay associated to converter bay - 2 set</p>	<p>We understand that the converter bay and it's associated tie bay will form a half dia &amp; shall be connected in a double breaker arrangement. Thus, any space provision or connection provision for 3rd bay in a dia is not required.</p> <p>Kindly Confirmed.</p>	<p>Bidder's understanding is in line with the provision of contract.</p>
27	Appendix - I Revised Section Project PKG-II 18 Oct 2024 'Cl. No. 1.2.1.1 Pg. 10/67	<p>Space for future bays. (KPS-3 HVDC)</p> <p>Future space to be kept in layout and to be shown in SLD, overall general arrangement:</p> <p>i. 400kV line bays-06 nos. (3 on each section)</p> <p>ii. 400kV reactor bays-02 nos. (1 on each section)</p>	<p>We understand that, we are considering the GIS hall for only present scope of bays only.</p> <p>Space for future bays is not considered in the GIS hall ( inline with Sr. No. 70 of 'Clarification-1')</p>	<p>Bidder's understanding is in line with the provision of contract.</p>

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
28	Amendment-II 'Sl. No. 1 & 2 Pg. 1/2	AC filter bay. (KPS-3 HVDC, Ext. South Olpad)  GIS bays are quantified as per owner specified items, bidder to quote the price of each GIS bay. For AC Filter bank bays (if required standard rating) shall be additionally paid in line with the per bay cost quoted in the BPS.	We understand that, the bidder needs to provide the optional quotation for AC filter bank bays in the BPS and if those bays are required during the execution stage same will be paid to OEM. However, the received BPS 'Price_schedule_rev01' doesn't have entries for the AC filter bank bay; please provide us revised BOQ with the entry for an AC filter bank bay.	AC Filter bank main Bay GIS has not been considered under present scope of Bidder. However, if the same is required during detailed engineering, AC Filter bank GIS bays shall be paid additionally in line with the per GIS bay cost quoted in the BPS for converter bay or line bay or transformer bay (as applicable to the Employer's design/ solution for AC filter bank).
29	Annexure-420kV GIS description Rev 01 'Cl. A. e) Pg. 3/7	AC filter bay & it's tie bay description (KPS-3 HVDC, Ext. South Olpad) 1) for AC filter bay: a. CB with CSD and with/without PIR (as per requirement) b. 3 nos. of 1-ph, individual operated DS & ES.  2) for tie bay of AC filter bay: a. CB with CSD and with/without PIR (as per requirement)	With reference to the above clarification, we need to provide the optional quotation for an AC filter bay. Thus please confirm/provide the following points; 1) for both CB for the AC filter bank bay and associated tie it's not clear whether the bidder should consider CB with PIR or without PIR. 2) the individual-operated DS and ES present in the bay description will be utilized on the outgoing side (bushing side) of the GIS and the spare switching arrangement or aux bus for the AC filter bay doesn't need to be considered.	AC Filter bank main Bay GIS has not been considered under present scope of Bidder. However, if the same is required during detailed engineering, AC Filter bank GIS bays shall be paid additionally in line with the per GIS bay cost quoted in the BPS for converter bay or line bay or transformer bay (as applicable to the Employer's design/ solution for AC filter bank).
30	Annexure-420kV GIS description Rev 01 'Cl. A. d) Pg. 3/7	Converter feeder tie bay module description (KPS-3 HVDC, Ext. South Olpad) vi. Three (3) numbers 1-phase, 3150A, SF6 ducts inside GIS hall (up to the outer edge of the wall of GIS Hall)	Please note that, considering that converter bay and it's tie bay is a part of half dia arrangement (double breaker arrangement) the item for bus-duct for the tie bay is not considered.  The bus duct for the converter bay is already included in the GIS description for converter bay, thus we think the included SF6 duct item for the tie bay is a typographical error.  please share us the revised 420kV GIS description document.	For converter bays at KPS3 HVDC & South Olpad HVDC, GIS Duct for main bay as part of GIS module is under present scope. Tie bay GIS duct is not envisaged.
31	Appendix - I Revised Section Project PKG-II 18 Oct 2024 'Cl. No. 1.3.3 Pg. 46/67	GIS hall Extension (KPS-3 Extn) Works required to be carried out in existing GIS Hall of Section-I & Section-II (which inter alia includes extension of existing GIS Halls, EOT Cranes, LCC rooms for feeders/ Bus modules etc.) is under present scope of contractor.  As per BOQ: 400 kV, 4000A, 63kA, Single phase, SF6 Gas Insulated Bus duct(GIB) outside GIS hall along with associated support structure-(Qty- 60 Mtr)	Please note that, there is uncertainty about regarding the GIS hall for this GIS extension. As per the revised section project for both GIS at section-I and section-II existing GIS hall will be extended. However, as per BOQ, main bus outdoor GIB entry is present so new GIS hall will be constructed for the same.  Please clarify about the GIS hall extension. currently, we are considering existing GIS hall of section-I (existing M/s PGCIL) will be extended & new GIS hall for section-II (existing M/s Adani) will be constructed.	The requirement of technical specification shall be fulfilled



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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
32	General	Existing S/S (Ext. KPS-3)	<p>Please confirm the understanding about the existing S/S of KPS-3, the existing GIS for each KPS-3 section are as follows:</p> <p>1) for Section -1: Existing GIS of Hyosung make from SS02 package (PGCIL)</p> <p>2) for section -2: existing GIS of Hyosung make from extension of 400kV Khavda (KPS 3) S/S Phase-IV (7GW): Part A.</p> <p>Kindly confirm the same.</p>	<p>At KPS 3 (existing)</p> <p>Section -1 : Make of the existing GIS is Hyosung.</p> <p>Section -2 : The make of the existing GIS is yet to be confirmed by BPC. The same shall be provided during detailed engineering</p>
33	Price_schedule-PKG-II-400KV-TBCB Sheet: Sch-1	<p>Configuration of line with associated tie bay (KPS-3 Extn.)</p> <p>For KPS-3 extn.</p> <p>Line bay - 4 set</p> <p>Tie bay associated to converter bay - 4 set</p>	<p>As per our understanding the Line bay and it's associated tie bay will form a half dia &amp; shall be connected in a double breaker arrangement. Thus, any space provision or connection provision for 3rd bay in a dia is not required.</p> <p>Kindly confirm.</p>	<p>For line bays at KPS3 (existing), GIS Duct for main bay as part of GIS module is under present scope. Tie bay GIS duct is not envisaged.</p>
34	GIS Rev-5A Cl. No. 5.41-9 Pg. No. 22/105	<p>Standard GIB types (KPS-3 HVDC Ext. KPS-3 Ext. South Olpad)</p> <p>GIS manufacturer as per their design shall preferably use maximum three standard straight horizontal outdoor bus duct lengths for entire GIS installation to optimize the spare requirement.</p>	<p>We would like to inform you that, the GIB layout is governed by many factors such as site condition, Gas to Air Bushing location, GIS OEM design, clearances etc. Hence keeping the GIB types to three is not possible. We shall use least number of types as possible for GIB layout.</p> <p>We cannot apply using of maximum three standard straight horizontal outdoor bus duct lengths, but we will try to reduce and optimize the GIB type during the detail engineering stage</p> <p>Kindly confirm the same.</p>	<p>Noted. However, bidders shall make necessary efforts as per actual site conditions to reduce and optimize the GIB type.</p>
35	General	<p>Shutdown requirement (Ext. KPS-3 Ext. South Olpad)</p>	<p>We would like to inform you that, the 400KV KPS-3 &amp; South Olpad S/S are an extension substation during the installation and commissioning, the adjacent existing feeder should have to take a shutdown along with one bus bar.</p> <p>Kindly consider the same.</p>	<p>Shutdown details shall be finalized during detailed engineering.</p>
36	General	<p>BUS V.T. (Ext. KPS-3 Ext. South Olpad)</p>	<p>Please note that, we are not considering the supply of any bus VT in the present scope.</p> <p>We assume that existing GIS will be having bus VT on bus bar.</p> <p>Kindly confirm BUS V.T. requirement</p>	<p>Bus VT is not envisaged for extension of KPS3 (existing) and Extension of South Olpad.</p>
37	Price_schedule-PKG-II-400KV-TBCB Sr No 82 to 109 Sheet: Sch-1	<p>Special tools (KPS 3- HVDC, Ext. South Olpad)</p>	<p>Please note that, we will supply the special tools as per our proposed special tools list only.</p> <p>The testing and maintenance equipment that are not included in our proposed special tools list shall be EPC's scope.</p> <p>Sr. No. 80-104 (KPS-3 HVDC) → EPC's scope.</p> <p>Sr. No. 49-73 (S. Olpad Extn) → EPC's scope</p> <p>Kindly confirm the same.</p>	<p>The bidder to provide all the testing and maintenance equipment as per BPS and Technical Specification</p>

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
38	Price_schedule-PKG-II-400KV-TBCB Sheet: Sch-1	Configuration of converter bay with associated tie bay (KPS-3 HVDC & Ext. South Olpad)  For KPS-3 HVDC & South Olpad extn. Converter bay - 2 set Tie bay associated to converter bay - 2 set	Please note that, as per our understanding the converter bay and it's associated tie bay will form a half dia & shall be connected in a double breaker arrangement. Thus, any space provision or connection provision for 3rd bay in a dia is not required.	Please refer clarification given above regarding the same.
39	Appendix - I Revised Section Project PKG-II 18 Oct 2024 Cl. No. 1.2.1.1 Pg. 10/67	space for future bays. (KPS-3 HVDC)	Please note that, we are considering the GIS hall for only present scope of bays only. Space for future bays is not considered in the GIS hall ( inline with Sr. No. 70 of 'Clarification-1')	Please refer clarification given above regarding the same.
40	Amendment-II Sl. No. 1 & 2 Pg. 1/2	AC filter bay. (KPS-3 HVDC, Ext. South Olpad)  GIS bays are quantified as per owner specified items, bidder to quote the price of each GIS bay. For AC Filter bank bays (if required standard rating) shall be additionally paid in line with the per bay cost quoted in the BPS.	Please note that, as per the amendment, we understand that, the bidder needs to provide the optional quotation for AC filter bank bays in the BPS and if those bays are required during the execution stage same will be paid to OEM. However, the received BPS 'Price_schedule_rev01' doesn't have entries for the AC filter bank bay, please provide us revised BOQ with the entry for an AC filter bank bay.	Please refer clarification given above regarding the same.
41	Annexure-420kV GIS description Rev 01 Cl. A. e) Pg. 3/7	AC filter bay & it's tie bay description (KPS-3 HVDC, Ext. South Olpad)  1) for AC filter bay: a. CB with CSD and with/without PIR (as per requirement) b. 3 nos. of 1-ph, individual operated DS & ES.  2) for tie bay of AC filter bay: a. CB with CSD and with/without PIR (as per requirement)	With reference to the above clarification, we need to provide the optional quotation for an AC filter bay. Thus please confirm/provide the following points; 1) for both CB for the AC filter bank bay and associated tie it's not clear whether the bidder should consider CB with PIR or without PIR. 2) the individual-operated DS and ES present in the bay description will be utilized on the outgoing side (bushing side) of the GIS and the spare switching arrangement or aux bus for the AC filter bay doesn't need to be considered.	Please refer clarification given above regarding the same.
42	Annexure-420kV GIS description Rev 01 Cl. A. d) Pg. 3/7	converter feeder tie bay module description (KPS-3 HVDC, Ext. South Olpad)  vi. Three (3) numbers 1-phase, 3150A, SF6 ducts inside GIS hall (up to the outer edge of the wall of GIS Hall)	Please note that, considering that converter bay and it's tie bay is a part of half dia arrangement (double breaker arrangement) the item for bus-duct for the tie bay is not considered.  The bus duct for the converter bay is already included in the GIS description for converter bay, thus we think the included SF6 duct item for the tie bay is a typographical error.  please share us the revised 420kV GIS description document.	Please refer clarification given above regarding the same.

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
43	Appendix - I Revised Section Project PKG-II 18 Oct 2024 Cl. No. 1.3.3 Pg. 46/67	GIS hall Extension (KPS-3 Extn)  Works required to be carried out in existing GIS Hall of Section-I & Section-II (which inter alia includes extension of existing GIS Halls, EOT Cranes, LCC rooms for feeders/ Bus modules etc.) is under present scope of contractor.  As per BOQ: 400 kV, 4000A, 63kA, Single phase, SF6 Gas Insulated Bus duct(GIB) outside GIS hall along with associated support structure-(Qty- 60 Mtr)	Please note that, there is uncertainty about regarding the GIS hall for this GIS extension. As per the revised section project for both GIS at section-I and section-II existing GIS hall will be extended. However, as per BOQ, main bus outdoor GIB entry is present so new GIS hall will be constructed for the same.  Please clarify about the GIS hall extension. currently, we are considering existing GIS hall of section-I (existing M/s PGCIL) will be extended & new GIS hall for section-II (existing M/s Adani) will be constructed.	Please refer clarification given above regarding the same.
44	General	Existing S/S (Ext. KPS-3)	Please confirm the understanding about the existing S/S of KPS-3, the existing GIS for each KPS-3 section are as follows: 1) for Section -1: Existing GIS of Hyosung make from SS02 package (PGCIL) 2) for section -2: existing GIS of Hyosung make from extension of 400kV Khavda (KPS 3) S/S_Phase-IV (7GW): Part A.  Kindly confirm the same.	Please refer clarification given above regarding the same.
45	Price_schedule-PKG-II- 400KV-TBCB Sheet: Sch-1	Configuration of line with associated tie bay (KPS-3 Extn.)  For KPS-3 extn. Line bay - 4 set Tie bay associated to converter bay - 4 set	Please note that, as per our understanding the Line bay and it's associated tie bay will form a half dia & shall be connected in a double breaker arrangement. Thus, any space provision or connection provision for 3rd bay in a dia is not required.	Please refer clarification given above regarding the same.
46	3.0 GIS Rev-5A Cl. No. 5.41-9 Pg. No. 22/105	Standard GIB types (KPS-3 HVDC Ext. KPS-3 Ext. South Olpad)  GIS manufacturer as per their design shall preferably use maximum three standard straight horizontal outdoor bus duct lengths for entire GIS installation to optimize the spare requirement.	We would like to inform you that, the GIB layout is governed by many factors such as site condition, Gas to Air Bushing location, GIS OEM design, clearances etc. Hence keeping the GIB types to three is not possible. We shall use least number of types as possible for GIB layout.  we cannot apply using of maximum three standard straight horizontal outdoor bus duct lengths, but we will try to reduce and optimize the GIB type during the detail engineering stage  Kindly confirm the same.	Please refer clarification given above regarding the same.
47	General	Shutdown requirement (Ext. KPS-3 Ext. South Olpad)	We would like to inform you that, the 400KV KPS-3 & South Olpad S/S are an extension substation during the installation and commissioning, the adjacent existing feeder should have to take a shutdown along with one bus bar.  Kindly consider the same.	Please refer clarification given above regarding the same.
48	General	BUS V.T. (Ext. KPS-3 Ext. South Olpad)	Please note that, we are not considering the supply of any bus VT in the present scope. We assume that existing GIS will be having bus VT on bus bar.  Kindly confirm BUS V.T. requirement	Please refer clarification given above regarding the same.

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
49	GTR Rev 15 Cl No 18.2 Pg No 27	Stainless steel marshaling box (KPS-3 HVDC Ext. KPS-3 Ext. South Olpad)  Control cabinets, junction boxes, Marshalling boxes & terminal boxes, Out door ACDB cum DCDB panels shall be made of stainless steel of at least 1.5 mm thick or aluminum enclosure of at least 1.6 mm thick and shall be dust, water and vermin proof. Stainless steel used shall be of grade SS304 (SS316 for coastal area) or better.	All LCC and marshaling boxes will be installed indoor side, it is well controlled temperature & humidity it does not need to apply the SS316, we apply it with general mild steel.  Kindly confirm the same.	Technical specification requirement shall be complied.
50	General	Existing GIS gasworks (Check existing GIS make) (Ext. KPS-3 Ext. South Olpad)	During detail engineering, we need to open the main bus end covers of existing GIS during the site visit and installation of GIS. At that time, EPC or the customer side shall arrange the supervisor of the existing GIS maker and shall bear the expenses of the supervisor including traveling, boarding & loading, etc.  Additionally, all the required consumables and materials during the site visit shall be prepared by EPC or the customer side.  Kindly accept the same.	Bidder to extend the GIS at existing substation and any OEM support, if required, for supervision or for extension of the existing GIS shall be arranged by the bidder under present scope of work.  All expenses including travelling, boarding & loading, etc. for supervisor and consumables and material shall be borne by Bidder under present scope of work.
51	General	Client's Input during bidding stage (KPS-3 HVDC Ext. KPS-3 Ext. South Olpad)	The quotation of technical data and the cost submitted by our company are estimated based on the existing GIS drawings and technical data provided by the customer at the time of bidding stage. After receiving a LOA, If somethings are identified that was not found in the existing GIS drawing or technical data provided by the customer during bidding become issues and at the detailed design stage, we request the customer to pay for the change.	The bidder to quote as per the BPS and technical specification. The extension of existing GIS is under present scope of work. Details of existing GIS and technical data shall be provided during detailed engineering.
52	General	Request for additional documents about existing GIS (Ext. South Olpad)	Kindly provide us with following documents of the existing GIS: 1) Existing GIS layout with all required dimension (Preferred AutoCAD document) 2) Existing GIS Gas SLD and SLD. 3) Existing end cover details. 4) existing foundation and cable trench details 5) existing GIS earthmat and S/S earthmat layout. 6) Existing GIS building layout with column details. 7) Existing S/S. LCC Drawing. 8) Existing S/S. Insulation Coordination Data. 9) Existing S/S. VFTO Data. 10) Confirm if gas density monitors of existing GIS can be used. 11) confirm if Separate end cover is provided in existing GIS as per IEC 62271-203 and IEEE (End cover shall be a separate module without any active part of the same	The requisite detail (from point no. 1 to 9) shall be provided during detailed engineering. For point no. 10 & 11) bidder to meet the requirement of technical specification.

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
53	General	Additional requirement other than IEC (KPS-3 HVDC Ext. KPS-3 Ext. South Olpad)	Our equipment is HVAC switchgear and developed based on IEC standard, not HVDC switching equipment. Our equipment can't guarantee any performance beyond the IEC standard for HVAC. And the customer should review and clearly inform OEM about the effect of HVDC on our HVAC GIS.	Bidder to quote as per BPS and Annexure-GIS Description Rev-01.
<b>COMMERCIAL QUERIES</b>				
54	Vol-I Section-VI (Sample Forms and Procedures) Appendix-I (Mode of payment)	The Employer shall make payments promptly within thirty (30) days of submission of an invoice/claim by the Contractor, complete in all respects and supported by the requisite documents and fulfillment of stipulated conditions, if any. All the payment shall be released to the Contractor directly.	For all progressive payments, POWERGRID is requested to please consider mode of payment as site Letter of credit also.	Provisions of the Bidding Document shall remain unchanged.
55	Insurance add-on to EAR policy (Appendix-3) Sample Forms & Procedures	(III) The following add-on covers shall also be taken by the Contractor: i) Earthquake ii) Terrorism iii) Escalation cost (approximately @10% of sum insured on annual basis) <b>iv) Extended Maintenance cover for Defect Liability Period</b> v) Design Defect vi) Other add-on covers viz., 50-50 clause, 72 hours clause, loss minimization clause, waiver of subrogation clause (for projects of more than Rs.100 crores, cover for offsite storage/fabrication (over Rs.100 crores).	Please note that as per attached extract of treaty agreed with Insurers & Reinsurer, Extended maintenance cover can only be provided for maximum 24 months in EAR policy. We have also taken up with all major insurers, but none of the them are ready to offer add-on coverage in EAR policy for more than 24 months. Hence, EAR Insurance policy can get issued with maximum 24 months Extended maintenance cover only.  It is hence requested to please review and amend Extended Maintenance cover for Defect Liability Period under EAR policy to maximum of 24 months.	Provisions of the Bidding Document shall remain unchanged.
56	FORM No. 18  FORM OF SAFETY PLAN TO BE SUBMITTED BY THE CONTRACTOR WITHIN THIRTY DAYS OF AWARD OF CONTRACT	6.THAT the Contractor ..... The Safety Steward/Supervisor from Contractor's own roll having thorough knowledge about the works would be deployed so as to percolate safety instructions upto the grass root level in healthy spirits. Contractor has to ensure close supervision while executing critical locations of transmission lines / sub stations and ensures that all safety instructions are in place and are being followed.	The Safety Officer/Steward/Supervisor will be deployed by bidder through sub-contractor (not on bidder roll) meeting the qualification and experience requirement as per BOCW Act.  Safety Steward shall be deployed with gang/activity having minimum 50 gang members/labours.  Kindly confirm.	Provisions of the Bidding Document shall remain unchanged.
57	FORM No. 18  FORM OF SAFETY PLAN TO BE SUBMITTED BY THE CONTRACTOR WITHIN THIRTY DAYS OF AWARD OF CONTRACT	Such Safety Officers shall be assisted by suitable and adequate Safety Supervisors and Safety Stewards. The Safety Officer will report directly to his head of organization and not the Project Manager of Contractor He shall also not be assigned any other work except the work of safety. The curriculum vitae of such person shall be got cleared from POWERGRID Project Manager / Construction staff.	Considering huge scale of operation and diversified areas catered by bidder (not limiting to Transmission projects) and due to the impracticability associated, the Safety Officer will report to Bidder's Sector Head instead of Head of Organisation. Kindly confirm.	Provisions of the Bidding Document shall remain unchanged.

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S No.	Clause Ref.	Tender Document Clause	Query	POWERGRID Response
58	FORM No. 18  FORM OF SAFETY PLAN TO BE SUBMITTED BY THE CONTRACTOR WITHIN THIRTY DAYS OF AWARD OF CONTRACT	The Safety Supervisor shall be Bachelor of Science/ diploma in Engineering with 2 years' relevant experience in safety. The qualification of Safety Steward shall be ITI or equivalent with 2 years relevant experience in safety.	As per BOCW Act, there is no specific criteria/requirement regarding qualification and experience for Safety Supervisor/Safety Steward.  Although, bidder agrees for experience requirement of 2 years for Safety Supervisor/Safety Steward. Accordingly, Safety Supervisor/Safety Steward will be deployed by bidder through sub-contractor having 2 years experience (without any specific qualification requirement). Kindly confirm.	Provisions of the Bidding Document shall remain unchanged.
59	GCC 18.3.3.17	In case, the Contractor fails to deploy Qualified Safety Officer(s)/Safety Supervisor(s) /Safety Steward(s) under each Contract, as specified in the Safety Plan, then the Contractor shall be responsible for payment of a sum of Rs. 15,00,000/- per quarter or part thereof, on a pro-rata basis, till the Safety Officer(s)/ Safety Supervisor(s) /Safety Steward(s)) is deployed, to be deposited with the Employer, which will be retained in the Safety Corpus Fund pursuant to GCC Sub-Clause 18.3.3.26. Further, the Project Manager shall have the right at his sole discretion to stop the work in line with GCC Sub-Clause 18.3.3.19 till the Safety Officer(s)/ Safety Supervisor(s) /Safety Steward(s) is deployed by the Contractor.	POWERGRID is requested to relax the stringent penalty clause of 15,00,000/- per quarter.	Provisions of the Bidding Document shall remain unchanged.

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